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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,052

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Katsumi Mochitate

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38834

7590

06/24/2010

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EXAMINER

HANLEY, SUSAN MARIE

ART UNIT

PAPER NUMBER

1651

NOTIFICATION DATE

DELIVERY MODE

06/24/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,052	<b>Applicant(s)</b> MOCHITATE, KATSUMI	
	<b>Examiner</b> SUSAN HANLEY	<b>Art Unit</b> 1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 16-34 is/are pending in the application.
- 4a) Of the above claim(s) 16-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-15, a bio-based polymer substrate that is collagen and maleic anhydride/styrene copolymer as the hydrophobic absorptive polymer ( $X=CH$ ,  $m=2$ ,  $R_1=H$ ,  $R_2=phenyl$ , the spacer is absent ( $p$  and  $q$  are both zero),  $Y$  is  $CH$  and  $z$  is maleic anhydride) for the in the reply filed on 7/15/09 is again acknowledged.

Claims 16-34 stand withdrawn.

The combination of collagen and MAST as the substrate and hydrophobic bind-absorptive polymer was found to be allowable. Claims 2-15 have been cancelled.

The specie elections are withdrawn.

Claim 1 remains under examination.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The response and amendment filed 03/29/2010 are acknowledged. The rejections not explicitly restated below are withdrawn due to Applicant's response in said amendment. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Art Unit: 1651

### ***Specification***

The specification remains objected to because it contains amino acids sequences or refers to amino acid sequences that are not identified by SEQ. ID. Nos. (pages 11, 12, 16, 25, 26, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, ,55, 56 and 57).

Applicant defers action on this issue until the rejections based on 35 USC 112 and 102 are withdrawn.

It is again noted that withdrawn claim 24 contains amino acid sequences that are not identified by SEQ ID Nos.

### ***Claim Suggestion***

It is suggested that the abbreviation "MAST" appear in parentheses after the name of the copolymer which should not be in parentheses.

### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 drawn to a cell culture substrate coated with styrene/maleic anhydride copolymer (MAST) which is a hydrophobic-absorptive polymer having a linear skeleton and a functional group that can react to a protein or a peptide in a molecule.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Frutos et al. (US 2004/0043508) in light of Boone (US 2003/0099925).

Frutos et al. disclose a glass slide having a coating of poly[styrene-co-maleic anhydride] disposed thereon (last two lines of section [0042]). Poly[styrene-co-maleic anhydride] is a linear polymer wherein the carbonyls of the anhydride moiety can react with nucleophiles such as amines.

Boone teaches that mammalian cells are cultured on glass slides (section [0084]).

Therefore, a glass slide is suitable substrate for culturing cells.

Frutos et al. is silent regarding the hydrophobic-absorptive characteristics but meets the claimed limitations which indicates that the claimed characteristics should be present in the prior art invention as also as those instantly claimed. In this case, burden is shifted to the Applicant to distinguish the instant invention over the prior art.

It is noted that In re Best (195 USPQ 430) and In re Fitzgerald (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter shown to be in the prior art does not possess characteristic relied on" (205 USPQ 594, second column, first full paragraph).

The disclosure by Boone is a supporting reference and properly used in a rejection under of U.S.C. 102 since it describes that glass slides are appropriate for cell culture.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN HANLEY whose telephone number is (571)272-2508. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Hanley/  
Examiner, Art Unit 1651